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Final Technical Report

**Radar Interferometer Investigations of the
Horizontal Winds, Vertical Velocities:
EPSCoR Supplement for Student Support**

AFOSR Grant # F49620-92-J-0458

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Report Submitted: 1 February 1997

Abstract

Funds were granted to Clemson University to support a Ph.D. student working in Atmospheric Physics. The student, Mr. Christopher Odom, has completed his Masters Degree in Physics and is expected to finish his Ph.D. dissertation by the end of the calendar year 1997.

Progress Report

Funds were granted to Clemson University under EPSCoR Grant # F49620-92-J-0458 to support a Ph.D. student in atmospheric physics for a period of thirty-six months. Objectives of the grant were to expose the student to state-of-the-art instrumentation and modern data analysis techniques and to allow him to complete his Ph.D. dissertation research. All those goals have been achieved with the exception of the completion of the degree. The student is expected to achieve that goal by the end of calendar 1997.

After receiving the funds in 1992, we carefully screened the pool of available Ph.D. graduate students with U.S. citizenship who expressed an interest in atmospheric physics. The selection criteria included high potential for academic achievement and a strong interest in graduate research. Mr. Chris Odom was ultimately chosen and approved by AFOSR.

Chris has been an outstanding student academically. He has done well in all his coursework and passed the Ph.D. Qualifying exam on the first attempt.

During the time when he was supported by funds from the grant, Mr. Odom has participated in radar experiments in Greenland using the large-power 1290-MHz radar and a 2-MHz partial reflections interferometer system. He has also participated in experiments in Japan using the 53.5-MHz MU radar located near Kyoto for interferometric radar observations of waves and turbulence. In addition, Mr. Odom has been involved in the operation of the portable Clemson University 1290-MHz boundary layer radar interferometer system in Japan and the development of a 49.92-MHz interferometric radar system at Clemson.

Our department requires all students, even those who are accepted in the Ph.D. program, to complete a Masters thesis. Mr. Odom completed the Masters work in January 1996, although he had already made significant progress on the Ph.D. research as well. He is presently working on his Ph.D. dissertation and is expected to finish by the end of the calendar year in 1997.

The EPSCoR grant terminated on August 14, 1996. Since that date, funds to support Mr. Odom have come from other sources within the department. He will

continue to be supported with the alternative funds until he finishes his degree later this year or early next year.

COMPLETED PROJECT SUMMARY

TITLE: **Radar Interferometer Investigations of the Horizontal Winds,
Vertical Velocities: EPSCoR Supplement for Student Support**

PRINCIPAL INVESTIGATOR:

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INCLUSIVE DATES: 15 August 1992 to 14 August 1996

CONTRACT/GRANT NUMBER: F49620-92-J-0458

SENIOR RESEARCH PERSONNEL: M. F. Larsen

JUNIOR RESEARCH PERSONNEL: None

PUBLICATIONS: None

ABSTRACT OF OBJECTIVES AND ACCOMPLISHMENTS:

Funds were granted to Clemson University to support a Ph.D. student working in Atmospheric Physics. The student, Mr. Christopher Odom, has completed his Masters Degree in Physics and is expected to finish his Ph.D. dissertation by the end of the calendar year 1997.